WILDLIFE
in North Carolina

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JANUARY 1948

Conservation Is Everyone's Fight

(Excerpts from President Truman's address at the dedication of the Everglades National Park, Florida, on December 6, 1947).

Not often in these demanding days are we able to lay aside the problems of the times, and turn to a project whose great value lies in the enrichment of the human spirit. Today we mark the achievement of another great conservation victory. . . .

Our national park system is a clear expression of the idealism of the American people. Without regard for sectional rivalries or for party politics, the nation has advanced constantly in the last seventy-five years in the protection of its natural beauties and wonders. . . . These are people's parks, owned by young and old, by those in the cities and those on the farms. Most of them are ours today because there were Americans many years ago who exercised vision, patience, and unselfish devotion in the battle for conservation. . . .

Our parks are but one part of the national effort to conserve our natural resources. Upon these resources our life as a nation depends. Our high level of employment and our extraordinary production are being limited by scarcities in some items of our natural wealth. This is the time to develop and replenish our basic recources.

Conservation has been practiced for many decades and preached for many more, yet only in recent years has it become plain that we cannot afford to conserve in a haphazard or in a piecemeal manner. No part of our conservation program can be slighted if we want to make full use of our resources and have full protection against future emergencies. . . .

Each conservation need is dependent on the others. A slashed and burned forest brings erosion of uplands and fills downstream reservoirs with silt so that water power is lessened and irrigated farms lose their water supplies. Eroded farmlands contribute to devastating floods. Uncontrolled rivers mean lost electricity, farms without water, and perennial increasing flood danger.

To maintain our natural wealth we must engage in full and complete conservation of all our resources. . . .

The battle for conservation cannot be limited to the winning of new conquests. Like liberty itself, conservation must be fought for unceasingly to protect earlier victories. There are always plenty of hogs who are trying to get our natural resources for their own personal benefit.

Public lands and parks, our forests and our mineral reserves, are subject to many destructive influences. We have to remain constantly vigilant to prevent raids by those who would selfishly exploit our common heritage for their own private gain. Such raids on our natural resources are not examples of enterprise and initiative. They are attempts to take from all the people just for the benefit of a few. . . .

The establishment of this park is an object lesson and an example to the entire nation that sound conservation depends upon the joint endeavors of the people and their several governments. Responsibility is shared by town and state and the Federal government; by societies and legislatures and all lovers of nature. . . .

The problems of peace, like those of war, require courage and sustained effort. If we wish this nation to remain prosperous, if we wish it still to be "the home of the free," we can have it so. But if we fail to heed the lesson of other nations which have permitted their natural resources to be wasted and destroyed, then we shall reap a sorry harvest.

Wildlife in North Carolina

A bimonthly magazine devoted to the protection and restoration of our wildlife resources and to the improvement of hunting and fishing in North Carolina.

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COVER

Owners and their hounds await the starting signal for the first cast of the annual field trials of the North Carolina Fox Hunters Association, held in the Bayleaf community of northern Wake County in October. Story on page 16. News and Observer photo by Lawrence Wofford.

T. H. WALKER
Editor

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Natural Predation and Quail

By Ted R. Mitchell

Because those species of wildlife which are categorically classified predators are often viewed in a different light, individually or collectively, by various factions concerned with their *modus operandi,* a comprehensive, unbiased analysis of the over-all effects of predation on game populations is not readily found in the literature. For this reason, a careful review and evaluation of all factual data relevant to the subject is prerequisite to the formulation a policy for managing these forms which will be applicable to a large area, as a State.

The naturalist recognizes predation as a universal law of life representing an integral part of Nature's pattern. The sportsman, as a rule, is prone to look upon the predator as an unethical competitor in so far as his relations with game birds and animals are concerned, and is reluctant to accept his alleged good qualities as an adequate counterpoise. The farmer's opinion in the matter is usually based on observations and experiences in which the predator is invariably found gilty of seemingly wanton depredation on poultry, livestock, or game. Therefore, the predator's prominent place on the farmer's black-list is easily understood. The game manager is inclined to take a broad view of the ecological significance of predation. He is cognizant of the important role predators play in maintaining a biological balance, and realizes that over-zealous control of any species may cause unfavorable repercussions. He also realizes that predation is only one of many factors which determine the game-carrying capacity of a given area, and, that in manipulating natural factors, a judicious approach is of utmost importance.

Considerable Data

While there is yet much to be learned about predator - game relationships, a considerable amount of authentic information on the subject has been made available through the efforts of competent investigators in various sections of the country. Herbert L. Stoddard's findings in the Coöperative Quail Investigation carried on in Georgia and Florida from 1924 through 1928 represent, perhaps, the most complete coverage of the effects of predation on quail populations on a year-round basis, and over a period of years. In this work the influence of each predatory species (and certain forms not generally considered predaceous) upon quail populations in the Southeast was studied intensively. The findings are varied and complex but indicate that all manageable predators should be kept within reasonable bounds if the largest possible quail populations are to be maintained.

In this connection Stoddard and Ed V. Komarek point out in a more recent paper (1941): "In the Southeast the bobwhite is, for all practical purposes, single-brooded and, while these birds continue nesting attempts from April to August or September if necessary, they cannot perpetuate and furnish a shootable surplus where combined pressure from natural enemies is too great during the breeding season—even though food and cover conditions approach the ideal." While their work in the Coöperative Quail Study Association deals primarily with conditions found on lands managed for the production of quail as the principal crop, a tolerant attitude toward predators is reflected in the paper which ends with the following sentence depicting an ideal quail preserve manager: "A wide gulf separates such a man from the vermin killing 'gamekeeper' of former days."

Carrying Capacity

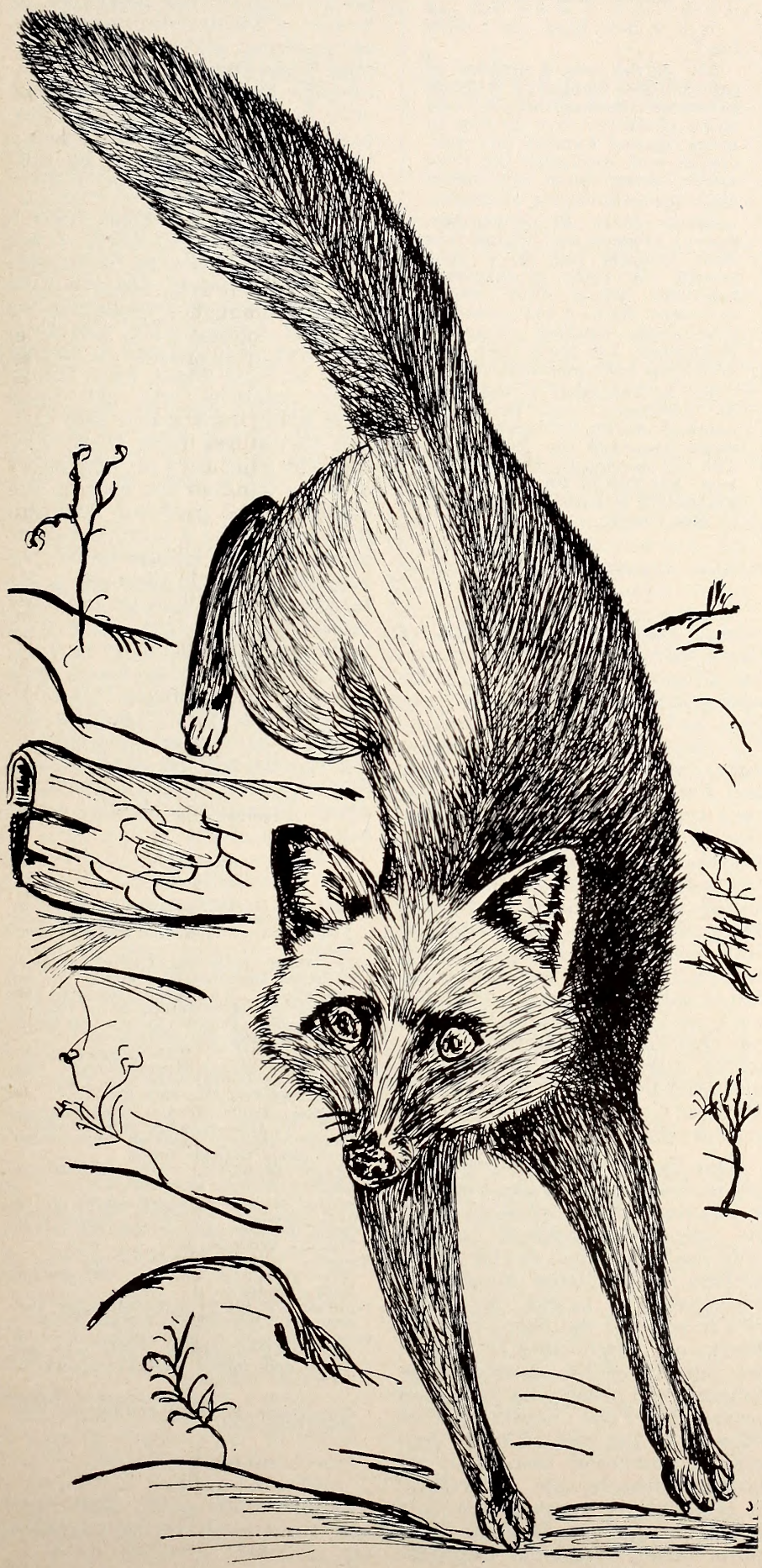
In reviewing some of the differences in predator-quail equations observed by Paul L. Errington and Stoddard in the North-central and Southeastern states, respectively, Errington states: "Judicious and selective reduction of local predator populations in the Southeast has usually given results satisfactory from the management standpoint; whereas, in North central states under conditions studied, an apparently greater flexibility in biotic relationships has allowed bobwhite populations to increase and to maintain levels up to the capacity of accommodation of their habitats, more or less regardless of the kinds and numbers of wild predators present." Errington and F. N. Hammerstrom, Jr., studying the over-winter survival of quail in the North central states, found that winter survival was in direct proportion to the carrying capacity of the land. They state: "Not once have we been able to establish a clear-cut case of difference in predator kinds and numbers having any net influence upon the losses from predation suffered by wintering bobwhites." Thus it is pointed out that winter populations of quail are reduced to conform to local environmental conditions, by one means or another, regardless of the presence or absence of major predator species.

Kenneth A. Wilson and Ernest A. Vaughn, reporting on an eight-year continuous game management project carried on in Maryland, found that predation was not a major limiting factor in building up and maintaining satisfactory quail populations. With regard to predator influence on carrying capacity, it is stated: "Today predator populations on the bobwhite management areas are about the same as they were when work was first started . . . except for foxes which are more numerous. . . . The quality and distribution of cover was so superior and other limiting factors so obvious that during the entire eight-year period only the smallest amount of predator control was deemed necessary."

The Fox

The adroitness of the fox as a predator on game birds and ani-

Extensive Studies Fail to Label the Fox As Robber Baron He Is Supposed to Be



mals, his relationship to the abundance of other forms of wildlife, and his economic and recreational value are subjects of much controversy among those interested in wildlife conservation and restoration. Studies of food habits and other characteristics of the fox have furnished valuable information on these subjects, and other studies and investigations now under way will, undoubtedly, provide additional data of prime importance in bringing about a better understanding of the fox's influence on game populations.

One of the most comprehensive accounts of the habits and activities of foxes (both red and gray) that has been published in recent years is the booklet, "The Fox in New York," by Clayton B. Seagears. While this work covers conditions found in New York State only, it is, nevertheless, an athoritative volume which should prove interesting and instructive to anyone concerned with the deeds and misdeeds of this animal. In the chapter dealing with food habits it is reported that the analyses of 4,269 fox scats and the stomach contents of 134 red and twenty gray foxes furnished data from which the following conclusions may be drawn:

1. The fox is an omnivorous feeder, eating a wide variety of both animal and vegetable food.
2. Year in and year out the items most frequently taken were rabbits and mice.
3. Next to rabbits and mice, fruit and insects occurred most often.
4. Game birds comprise a comparatively small part of the fox's bill-of-fare.
5. Poultry occurred in a relatively small number of specimens examined.
6. The items eaten at a given time or place depend mainly upon what is most readily available.

A Federal Aid Research Project, designed to determine the food habits of quail predators, was initiated in Mississippi on October 15, 1945. The first annual report, dated September 30, 1946, brings out one point of particular interest regarding fox-quail relationships. In the analyses of sixty-four gray fox stomachs and twenty-three scats, collected during each season of the year, quail remains did not occur in any instance. Of eight red fox

stomachs and twenty-six scats examined, quail remains were found in one stomach. All red fox specimens were collected during the winter months. The project leader in summarizing the report states: "No predation has been observed on game birds by gray foxes but results are not conclusive because of the small number of specimens secured, especially during the nesting period for game birds."

With reference to fox predation on quail, Stoddard and Komarek state: "Preliminary examinations of some four hundred fox stomachs, taken during quail breeding season on preserves where the approximate numbers of these birds are known, show serious destruction of quail eggs and young in some years, but little in others; there is a strong indication that proportionate destruction is greatest where abnormal fox abundance occurs, and that availability of other food supplies exerts profound influence."

Paul D. Dalke, reporting on wild turkey studies in Missouri, with regard to the effects of the larger predatory mammals on turkey populations says: "The presence of such predators as the gray and red fox, coyote, red wolf, and self-hunting dogs throughout the turkey range would seem to be a threat to turkey populations. The meagre record of turkey kills attributable to any of the above indicate two things: (1) That the number destroyed by them is relatively small, and (2) that the adult native wild turkey has a remarkable ability to survive. On Caney Mountain Refuge where only minimal control of predators has been practiced, but where other management practices have been stressed, turkeys have increased in five years from one bird to 550 acres, to a bird per 40 acres. So rapid an increase could not possibly occur if the resident foxes, coyotes, and self-hunting dogs were any great deterrent." The investigator also states: "The writer realizes that in other areas depredations on mature turkeys have jeopardized management programs and must be considered a major mortality factor."

A summary of fox stomach content studies in Virginia, 1932-1933, furnishes the following pertinent information: The contents of fifty red and gray fox stomachs, collected in January and February 1932, were examined. "Fifty-eight per cent of these individuals had fed on rabbit, 44 per cent on rodents (rats and mice), while only two per cent had eaten bobwhite quail." Of a total of twenty-seven stomachs collected during Summer and Fall, 1932, four, or 14.8 per cent contained quail remains. During the winter period, November 15, 1932, to February 1, 1933, thirty-four fox stomachs were collected and examined. "Of these thirty-three were grays and one was red. Of this group of foxes, eignteeh, or 52.9 per cent, had fed on rabbit; thirteen, or 38.2 per cent, on rodents; one each or 2.9 per cent each, on chicken or bobwhite quail." This report was prepared by C. O. Handley of the Virginia Commission of Game and Inland Fisheries.

The extent to which winged predators prey upon game species is another subject which is widely discussed. Research in this field has done much to clarify the picture. It has been found that two species of hawks, the Cooper's hawk and the sharp-shinned hawk, are responsible for a major portion of the damage done to game and poultry by feathered predators. Food habits studies show that the diet of other species is composed principally of rodents, insects, etc. Therefore, it is generally agreed that their beneficial qualities in controlling pests offset occasional depredations on game or poultry. In summarizing a paper reporting his attitude toward hawks, H. L. Beadel, a Southeastern quail preserve owner, states: "My experience indicates that an above-average quail population cannot only be maintained, but is more easily maintained by leaving hawks unmolested than by killing them."

The following passage from a recent article by Dave Cook seems to be pertinent in summation: "Fortunately, the scientific study of predator food habits has received considerable attention. We have accumulated a sizable body of facts about what things these creatures will eat, some facts about how much they eat, and even a few facts about why they eat what they do. The effect of these findings has been to deglamorize the predator business. No longer is he a terrible robber baron, levying tribute on all the lesser creatures in his domain. He turns out to be just an ordinary fellow trying to get along in a busy world. Occasionally he engineers a spectacular foray, gets his name in the papers. But mostly he plods along, getting his meals where he can and dreaming, mostly without avail, of that diet of red meat with which so many people mistakenly credit him."

Beadel, H. L., 1939—Hawks vs. quail on quail preserves. Circular 38, National Association of Audubon Societies, New York.

Cook, Dave, 1946—Concerning predators. Audubon Magazine, May-June.

Dalke, Paul D., and Spencer, David L., 1946—Some ecological aspects of the Missouri wild turkey studies. Trans. 11th North American Wildlife Conference.

Errington, Paul L., 1939—Suggestions for appraising effects of predation on local areas managed for bobwhite, Trans. 4th N. A. Wildlife Conference.

Errington, Paul L., and Hammerstrom, F. N., Jr., 1936—The northern bobwhite's winter territory. Research bulletin 201, Iowa State College, Ames.

Stoddard, Herbert L., 1931—The bobwhite quail. Scribners, New York.

Stoddard, Herbert L., and Komarek, Ed. V., 1941—Predator control in Southeastern quail management. Trans. 6th N. A. Wildlife Conference.

Seagears, Clayton B., 1944—The Fox in New York. N. Y. State Conservation Dept., Albany.

Turcotte, William H., 1946—Mississippi Federal Aid Project 15-R. Annual Report.

Wilson, Kenneth A., and Vaughn, Ernest A. The bobwhite quail in Eastern Maryland. Game and Inland Fish Commission of Maryland, Baltimore.

C. O. Handley—Progress report. Virginia Commission of Game and Inland Fisheries, Richmond.

HIGH—OR LOW?

Is it a new high—or a new low?

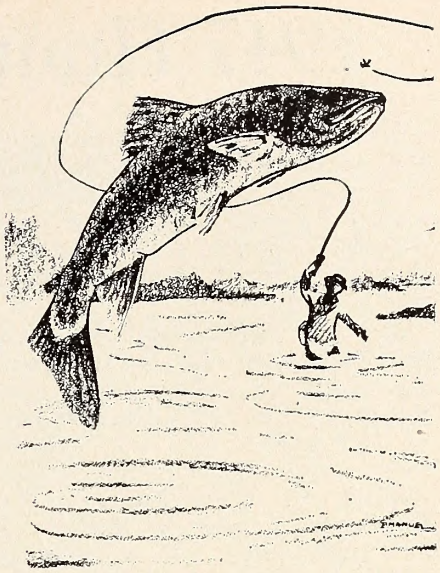
"It" is the record number of prosecutions which the Wildlife Resources Commission's fish and game protectors are having to bring against hunters and fishermen who disregard the laws which every good sportsman observes as a matter of course.

Since early in November, every prosecution which has been brought has set a new record for total prosecutions for one year. Last year's previous high—4,385 prosecutions—was equaled early in November, and since that time violations have mounted higher.

Up to December 1, the total of violations for the year reached 5,042, of which 662 were recorded in November. The bill handed to the violators was $35,272.26 in fines and $31,434.57 in court costs, a total of $66,706.83.

After hopping off, fleas turn and travel tail-first through the air.

Fishing Regulations For 1948 Adopted



Regulations for fishing in North Carolina's Inland Waters in 1948 contain only a few changes from those in effect last year. The new regulations were adopted by the Wildlife Resources Commission at a meeting in Raleigh on December 5 and 6, following a public hearing on the morning of the 5th.

Principal changes abolish the size limit on trout, and reduce the creel limit for trout from twelve to ten and for crappie from twenty to fifteen.

Working Agreement

Progress toward clarifying relationships between the Commission and the Department of Conservation and Development in matters where the interests of sport and commercial fishermen meet was made a few days later. A working agreement was adopted at a meeting in Edenton on December 8 between a special committee from the Commission and the Commercial Fisheries Committee of the Department of Conservation and Development.

A policy statement adopted reads as follows:

"The Wildlife Resources Commission recognizes and accepts authority for the regulation of fishing by any and all methods in the Inland Waters of North Carolina. The Commission recognizes the existing dividing lines between Inland and Commercial Waters and agrees to their present position until such times as the location of any such dividing line may be changed by a joint committee of the Commission and the Board of Conservation and Development or by the Governor.

"The Commission further holds that under the Wildlife Resources Act, it holds jurisdiction over fresh-water game fish wherever they occur."

The joint committee adopted changes in classification of three streams. The waters of the lower Catawba and Yadkin (Pee Dee) Rivers were changed from commercial to Inland Waters.

A third question, regarding a proposal that commercial fishermen be permitted to keep game fish caught incidental to commercial fishing operations, was held over for further action.

The regulations for fishing in Inland Waters:

1. *License Requirements:* Fishing licenses shall be required of all anglers as set forth in existing State laws, including the Wildlife Resources Act, except that licenses shall not be required in the following waters:

The Atlantic Ocean; the various coastal sounds (except that all fishing license requirements apply to Currituck Sound, Kitty Hawk Bay and tributaries); Cape Fear River below Highway No. 74 bridge at Wilmington; Neuse and Trent Rivers below Highway Nos. 17 and 70 bridges at New Bern; Pamlico and Tar Rivers below Highway No. 17 bridge at Washington; and New River below Highway No. 17 bridge at Jacksonville.

2. *Commercial and Inland Waters:* For the purpose of administering fishing regulations adopted by the Wildlife Resources Commission, the fishing waters of North Carolina are hereby divided into two general classes or divisions, namely Commercial Waters and Inland Waters. The following waters are designated as Commercial under agreement with the Board of Conservation and Development:

Alligator River below Gum Neck.
Bay River below Bayboro.
Brunswick River.
Cape Fear River below Kings Bluff Locks.
Cashie River below Sans Souci.
Chowan River to Virginia line.
Frying Pan River below Cooper's Creek, exclusive of the Narrows.
Goose Creek, a tributary of the Neuse, below the Narrows.
Lower Broad Creek, a tributary of the Neuse, below the Old Mill Site.
Lower Goose Creek, a tributary of the Pamlico River, below a line from Pasture Point to Long Neck Point.
Little River below Nixonton.
Lockwood Folly River below Supply.
Meherrin River to Virginia line.
Neuse River below Highway No. 117 bridge in Wayne County.
Newport River below the Narrows.
New River below A. C. L. bridge 1½ miles below Jacksonville.
North Prong of North Creek, a tributary of the Pamlico River, below Frank Credle's landing.
Northeast Cape Fear River below Highway 53 bridge.
North River below a line ½ mile above Thoroughfare Island.
Orchard Creek, in Pamlico County, below ¼ mile from its mouth.
Pamlico and Tar Rivers below bridge near Grimesland.
Pasquotank River below Highway No. 30 bridge at Elizabeth City.
Perquimans River below Crow's Point.
Pierce Creek, in Pamlico County, below ¼ mile from its mouth.
Pungo Creek from its mouth to highway bridge between Belhaven and Bath.
Pungo River below Highway No. 264 bridge at Leechville.
Roanoke River below highway bridge U. S. 301 at Weldon.
Scuppernong River below the mouth of First Creek.
South Creek, a tributary of the Pamlico, below a line on the north side of Tooley's Creek to the east side of Long Creek.
South River, a tributary of the Neuse, below the forks.
Smith Creek, in Pamlico County, below 1 mile from its mouth.
Trent River below Wilson's Creek.
Upper Broad Creek, a tributary of the Neuse, below the lower side of Flatty Creek.
Whitaker Creek, in Pamlico County, below ¼ mile from its mouth.
White Oak River below Stella except as noted in Commercial Fisheries regulations.
All inland rivers and their tributaries or portions of the same, together with all ponds and lakes in the State not included or specifically named in the above list, are designated as Inland Waters. All fishing in Inland Waters shall be under the jurisdiction of the Wildlife Resources Commission.

3. *Manner of Taking Fresh-Water Game Fish in All Waters:* It shall be unlawful for any person, persons, firm, or corporation to take or attempt to take fresh-water game fish in any of the waters of North Carolina except with hook and line, rod and reel, or by casting. Any fresh-water game fish taken incidental to licensed commercial fishing operations or taken in connection with authorized removal of non-game fishes from public waters shall be returned to the water.

4. *Closed Season:* (a) Trout: It shall be unlawful to take all species of trout by any means from Inland Waters from September 1 through April 14, both dates inclusive; except in Ashe, Alleghany, and Watauga counties the closed season shall be August 1 to April 14. (b) Warm-water

(*Continued on page eighteen*)

1947 Hunt on Pisgah

1,000 Hunters Get 180 Deer, 11 Bear In Twelve Days

At 9 o'clock on the morning of November 10, Carroll L. Buckner of Asheville bagged a 128-pound buck deer near John's Rock, and the 1947 big game hunt on the Pisgah National Game Preserve was in full swing.

By the time firing was over on November 22, a thousand hunters from eleven states and the District of Columbia had taken 180 deer and eleven bear in twelve days of hunting in this twelfth big game hunt on the Preserve. It was the first hunt on Pisgah since 1945, when deer hunting was suspended in the western part of the State because of the deer-trapping and redistribution program.

Largest Animals

Largest of the deer killed on the 1947 hunt was a 185-pounder killed by Charles M. Tinsley of Brevard; largest bear was a 361-pounder killed by R. L. Rush of Lenoir. T. M. McCullough of Henderson got the deer with the best head—a 171-pound, six-point buck with a nineteen-inch spread.

More than 1,800 hunters had applied for permits for the Pisgah hunt, and applicants who won places at a public drawing in Brevard on October 21 built up even more enthusiasm by the time opening day rolled around. Cars had begun lining up at the checking stations at 12:30 a.m. to await the go-ahead at about 5 a.m.

For the hunt, Pisgah was divided into northern and southern shooting circles. A check-in-and-check-out method was used on the "main hunts," which were held in the Davidson River area on November 10, 11, 12, 17, 18, and 19, and in the North Mills River area on November 13, 14, 15, 20, 21, and 22. Wilderness hunts, in sections inaccessible by automobile, were held for three-day periods on Pisgah Ledge and in the Cantrell Creek and Big Creek areas.

Deer are brought into the North Mills River checking station during the big game hunt on the Pisgah National Game Preserve. The Ballard brothers of Edneyville are shown unloading a buck for weighing and measurement by John Eller (extreme right, holding tape measure), game technician with the U. S. Forest Service. (Wildlife Resources Commission photo.)

Mixed Weather

Unfavorable weather handicapped the hunters on several days of the hunt. After starting with a clear and windy day, on which fourteen deer and one bear were killed, the hunters ran into, at intervals throughout the hunt period, rain, warmth, drizzle, fog, cloudiness, and more wind. Top day of the hunt was the fourth, which was clear and which produced a total bag of twenty-six deer and two bear. On the seventh day, also clear, the total bag was eighteen deer and two bear.

The breakdown of the kill by areas:

Davidson River—64 deer, 5 bear; North Mills River—84 deer, 6 bear; Big Creek—6 deer; Pisgah Ledge—8 deer; and Cantrell Creek—18 deer.

The hunt, which was conducted by the Wildlife Resources Commission in coöperation with the U. S. Forest Service, was supervised by Fred Mahan of the Commission staff and Ranger W. W. Huber of the Forest Service. Miss Billie McConnell of the Asheville office of the Commission was in charge of the handling of applications.

Archery Hunt

The Pisgah National Game Preserve's first big game hunt for archers was held on the Bent Creek area on November 10, 11, and 12. Sixteen archers participated. No kills were made, although at least two of the hunters had shots at deer.

Meeting in Asheville on November 11, fourteen of the participating archers formed the Tar Heel Archery Association. Ralph Andrews, director of the Raleigh Recreation Commission, was elected president. Other officers are Phil R. Carlton of Greensboro, vice president; O. N. Rich of Raleigh, secretary-treasurer; and Maurice Cable of Asheville, publicity director.

Archers in North Carolina may become charter members of the Association until March 1, 1948.

"Like a duck takes to water" is a familiar expression. Swimming, of course, is a natural instinct with ducks. Young mallard ducks, upon their first venture from the nest, have been known to swim as far as a third of a mile.

Holly Shelter Hunt Is Successful

Twelve Deer Taken by 133 Men In Test of Still Hunting

The Wildlife Resources Commission decided last fall to test still hunting for big game in the eastern part of the State by holding on the Holly Shelter Wildlife Management Area in Pender County a public hunt limited to that method. The experiment turned out successfully; 133 hunters killed twelve deer in six days.

The hunt originally was scheduled for nine days—November 4, 6, 8, 11, 13, 15, 18, 20, and 22—with permits, costing a dollar each, to go to twenty-five hunters each day. When the deadline for applications arrived, only enough hunters for six days had applied, so it was decided to eliminate the last three days.

A large portion of the State was represented by the participating hunters. Eighty-two per cent came from counties outside Pender, and sixty-eight per cent traveled more than 100 miles to take part. Ten counties—from New Hanover to Mecklenburg—were represented by the successful hunters. Nine of the deer were taken by men from outside Pender, and three by Pender residents.

Hunting was done in compartments of about 500 acres each. Commission personnel took the hunters to their compartments, which were assigned by lot, and gave them instructions about the terrain and reminders about the regulations.

Good weather prevailed on all but the fourth and sixth days. And kills were registered on all but the fourth and fifth days. On the fourth, a day-long downpour of rain forced most of the hunters to leave the area before noon. Rain also fell on the closing day.

Four Deer on First Day

Opening day was the big day. Four deer were taken, including the largest bagged during the hunt — a 150-pound buck which fell to Dr. J. E. Hollis of Salisbury. Other kills, by days, were three on the second day, three on the third, and two on the sixth. The deer ranged in weight from 88 to 150 pounds, and averaged 107 pounds.

Contrary to pre-hunt expectations, more deer were killed during the middle of the day than during the early and late hours. It had been thought that the late afternoon would prove to be the best time for still hunting.

Practically every hunter entering the area saw game except on the rainy fourth day. There were sixteen known shots that missed. No bear were sighted, although several hunters reported they had seen bear tracks. The hunters generally were satisfied with the still-hunting method.

The hunt was supervised and managed by R. B. Armfield, Supervisor of Wildlife Lands; W. J. Rivers of the Sandhills Wildlife Area; Ollie Thompson of the Uwharrie Wildlife Area; and Archie Rivenbark of the Holly Shelter Area.

Weights, measurements, and other data on animals killed were assembled by William L. Hamnett and Dudley Robbins of the Commission's Federal aid staff.

Two successful hunters talk it over. Dr. J. E. Hollis of Salisbury, right, who brought out the first deer on opening day of the Holly Shelter hunt in November, tells the story to James Saunders of Burgaw, who came out right behind Dr. Hollis with a buck of his own. (Wildlife Resources Commission photo.)

Trapping Season Is Underway

North Carolina's 1947-48 trapping seasons:

Mink, muskrat, opossum, and raccoon — December 1 through February 15.

Exception: In Bladen, Columbus, Duplin, Greene, Hoke, Robeson, Sampson, Wayne, and Wilson counties, January 1 through January 31.

Exception: In Currituck County, December 15 through March 1.

Exception: Trapping is permitted in Pender County for mink, muskrat, and otter along streams January 1 through January 31.

Otter—January 1 through January 31.

Beaver—No open season.

Wildcat, weasel, skunk — No closed season.

A Stream Survey of the Savanah Watershed of North Carolina

By Joseph R. Bailey*

Several streams in the southern parts of Transylvania, Jackson, Macon, and Clay counties flow precipitously down from the North Carolina mountains to form the headwaters of the Savanah River. The North Carolina portion of this watershed covers only about 165 square miles, but within that area lie some of the State's most remote trout streams to challenge the fisherman who enjoys seclusion and doesn't mind some rough going in pursuit of his favorite sport. Among 80 miles of fishable streams, the Toxoway, Horsepasture, Whitewater, and Chattooga rivers are the largest and best known. They all rise as small brooks at elevations over 3,000 feet and fall at averages of 75 to 600 feet per mile. Such gradients clearly reflect the numerous falls, glides, and tumbling waters which characterize these rivers.

The country-side is sparsely populated with no towns and only a few communities boasting names. As a result there is no pollution dumped into the streams, little cleared land to add to the natural silt load, and the only industrial operation affecting the streams appreciably is lumbering, which is general throughout the area. The lumbering activities, by removing occasional shading trees and exposing the tributary stream to the sun's rays, raise the water temperatures slightly. On the other hand, moderate exposure and cutting add needed fertility to the stream. Lumber roads, though rough, add to the few routes in fishing country.

Aside from a few posted areas on small streams, the upper Toxoway River, and the Chattooga River, fishing is generally open to the public. Recently the U. S. Forest Service has acquired sizeable tracts within this area which will guarantee management favorable to continued good fishing.

Because of the character of the country and its occupancy, erosion, silting and pollution are not serious problems to the management of these streams. Burning has affected only a few rather small and scattered areas, but following the lumber operations it remains a possible source of future damage. Indications of damaging floods were not in evidence at the time the survey was conducted, but water levels evidently fluctuate greatly as is to be expected in streams of such steep gradient.

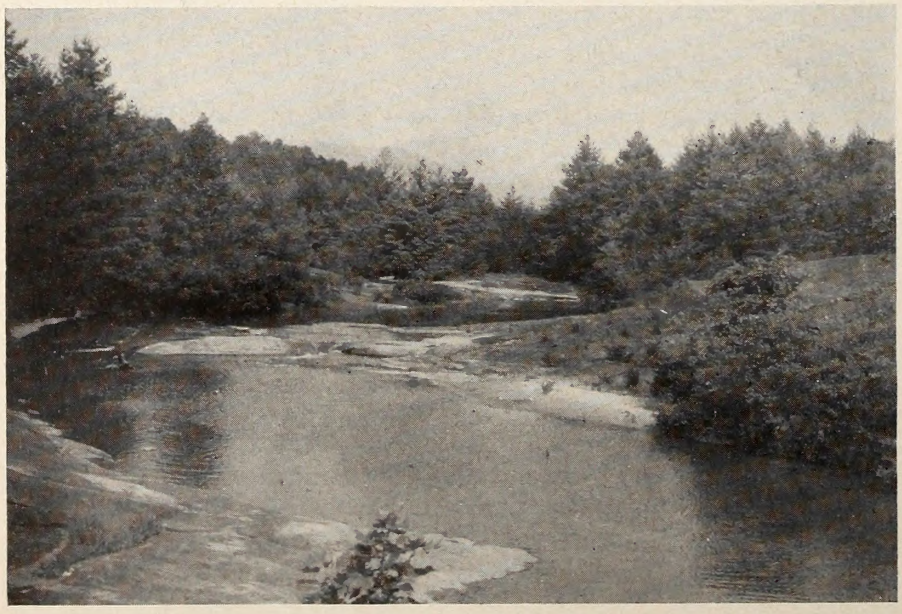
Chemical Data

Chemical analyses of the water gave very uniform results among the several samples tested. Dissolved oxygen was found to vary between 9.0 and 11.2 parts per million, near saturation, due to the extreme turbulence of the water. Free carbon dioxide was consistently low, indicating between 1.0 and 0.5 per million. All of the waters tested proved to be slightly alkaline, the pH ranging from 7.1 to 7.7. In these chemical characteristics, the watershed approaches ideal conditions for trout waters.

Temperature Data

In water temperatures the more important streams of the area are less favored. It might be expected from a description of the region that temperatures would be well within the limits suitable for all species of trout, but such is not the case. In spite of the scarcity of cleared land, the larger streams are too warm to support good populations of brook trout throughout the summer, and approach unfavorable temperatures for rainbow and brown trout. The explanation probably lies in the numerous falls and long smooth glides over bed rocks. The well known Toxoway Falls is an excellent example of these. Below U. S. Highway 64, the river, broken by actual falls only here and there, flows in a very thin sheet over a smooth rounded bed rock bottom, dropping 500 feet in half a mile with complete exposure to the sun's rays. Similar situations of somewhat less magnitude were noted elsewhere on the Toxoway River, on Indian Creek, Thompson River, Whitewater River, and Big Creek, and other tributaries of the Chattooga River.

* Stream party survey leader. Other members of the party were Fred Morrison, Yates Barber, and Frank Goss.



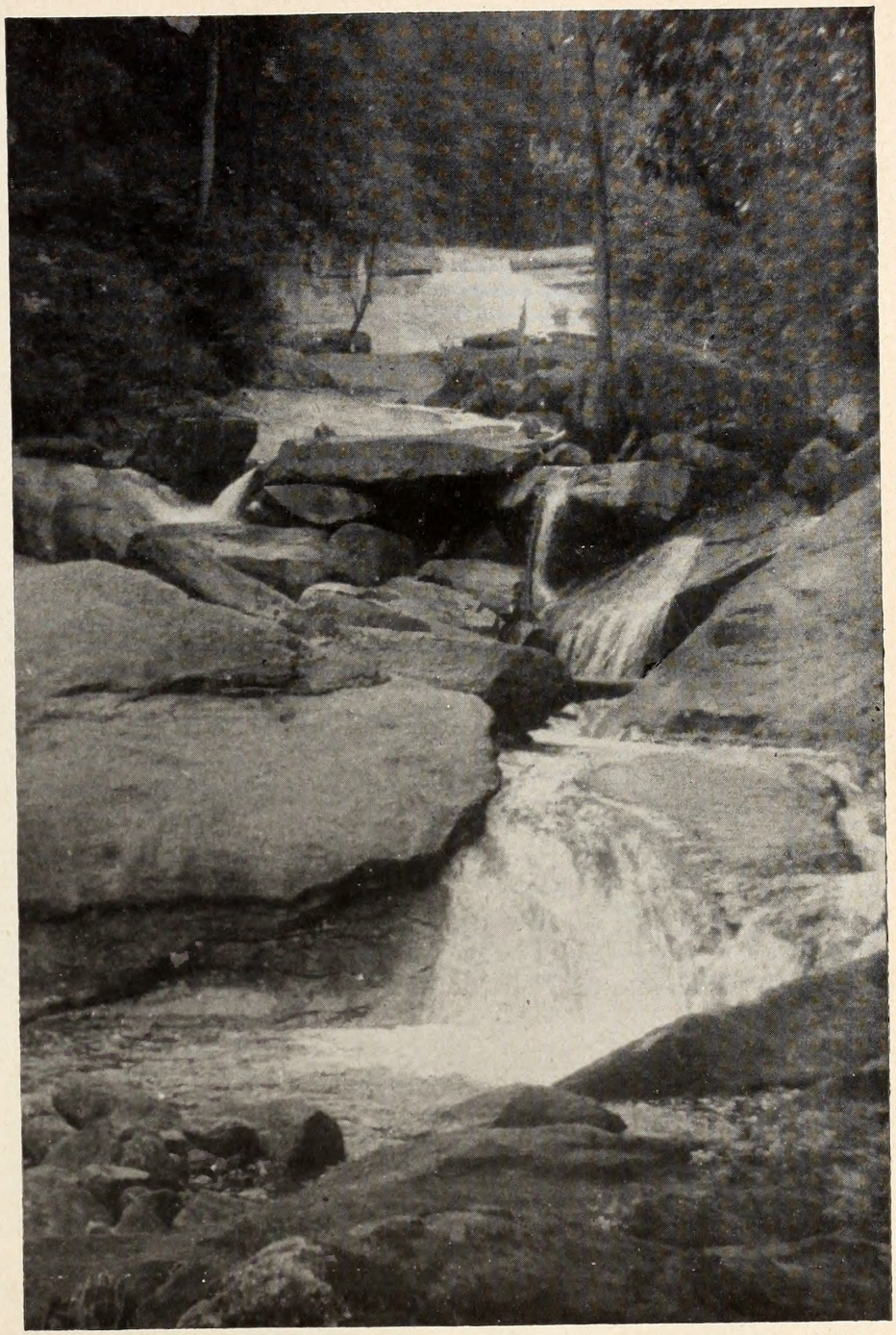
Toxaway River, showing exposed bed rock, which makes summer water temperatures critical for trout. (Photo by Willis King).

These conditions are beyond the limits of practical management, but indicate that much human disturbance of the temperature conditions through clearing, damming, etc., could easily make the larger streams unsuitable for trout.

The maximum water temperatures recorded by the survey on the larger streams varied from 70 to 73½ degrees Farenheit. The smaller streams were found to be safely cool for trout, varying between 60 to 69 degrees. An unusually hot spell of a few days duration would be expected to raise these figures for the large streams to the 75 degrees considered the safe maximum for rainbow trout.

Food Conditions

As a rule, cool mountain streams are relatively unproductive of the aquatic insects which form the basis of trout diet. The streams of the upper Savanah watershed are no exception. Where quantitative bottom samples were taken, the number of aquatic organisms per square foot varied between two and 20 and the volume from scarcely measurable to .275 cubic centimeters. These data indicate very poor productivity, which is to be expected in these torrential waters. They do not indicate necessarily poor trout streams since an important part of trout food, especially in small, well-covered streams, comes from terrestrial insects floating on the surface. In the larger streams, where terrestrial food is less of a factor, crayfish, salamanders, and one or more species of minnow or other forage fish were found prevalent, all acceptable items of trout food. Greater fertility as reflected by increased production of aquatic insects and other invertebrate forms would allow a denser trout population, but under the present fishing pressure on these streams this is not necessary for good fishing.



Tremendous cascades and slides typify streams of the Savanah River watershed in North Carolina. This picture was made on the Horsepasture River. (Photo by Fred D. Morrison).

Game Fish

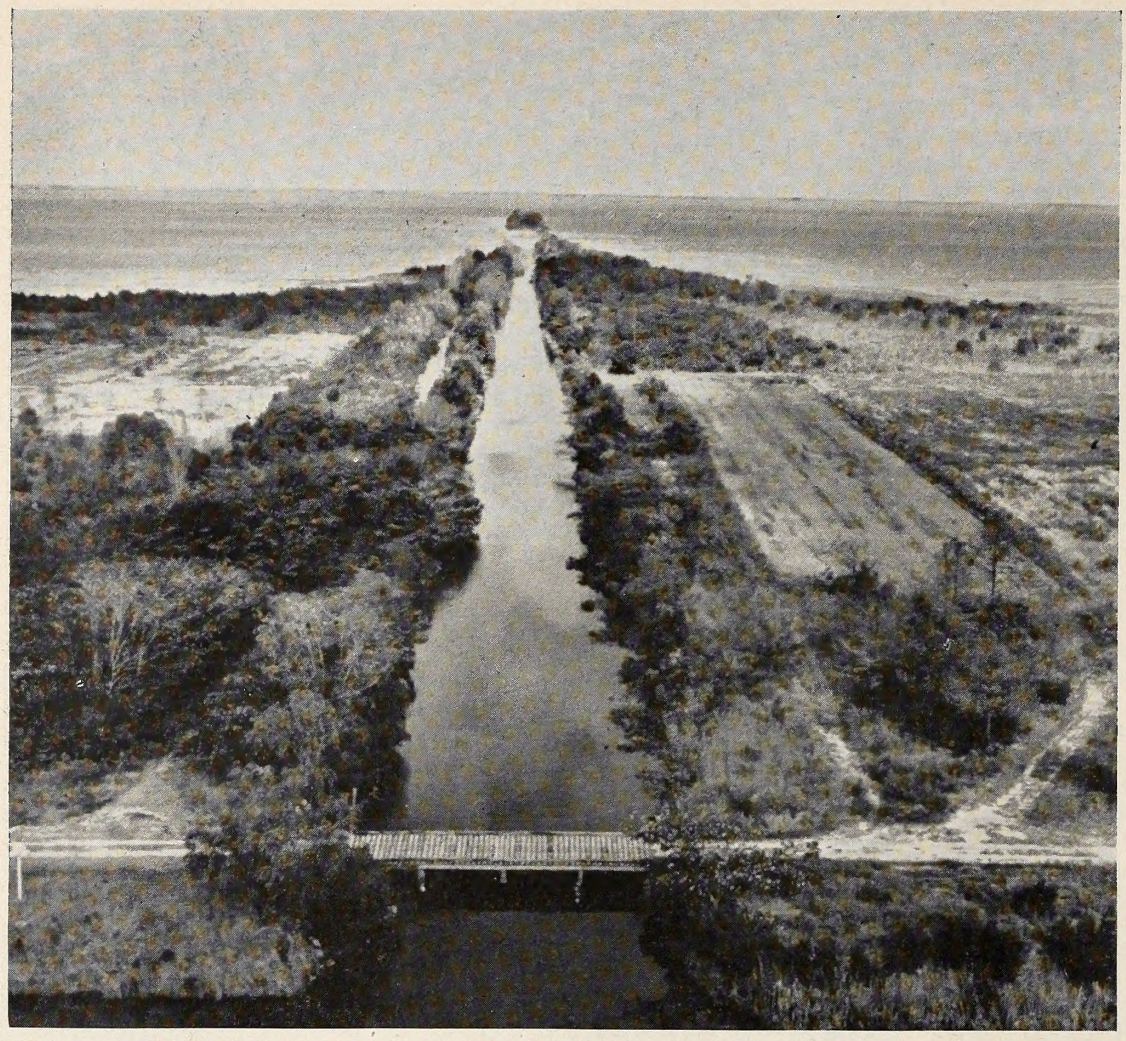
All of the 80 miles of streams considered large enough to be fishable may be classed as trout waters. The small and cooler tributaries, such as Bearwallow Creek and the head-waters of Overflow Creek, carry well conditioned brook trout which show excellent natural reproduction. The rivers and large tributaries are all classed as rainbow trout waters. Brown trout were taken by the survey party only in the upper Horsepasture River, though reported from the Whitewater River, and they probably occur elsewhere. However, since rainbow seem to have the upper hand and are generally preferred by fishermen, management for rainbow is recommended.

Only in the lower Horsepas-

(*Continued on page twenty-one*)

MILEAGE OF WATERS SUITABLE FOR MANAGEMENT

Stream System	Brook Trout	Rainbow Trout
Toxoway River	6½	18½
Horsepasture River	....	14½
Whitewater River	½	10½
Chattooga River	....	18
Big Creek	....	4
Clear Creek	2½	....
Overflow Creek	5	....
Tallulah River	....	2½
Total Miles	14½	68



$17,000 of Ca

250,000 gallons of water e ute. A canal seven miles dug and the water pump the lake over into thi whence it flowed by gra Pamlico Sound.

Town Built

Meantime, a modern h erected, a pretty little to Holland) sprung up on t bed, and a railway even to the new plantation. La architects came and beau 30-acre village. The fish stroyed and the bewilde terfowl sought other sa The agricultural promot not wrong — bumper corn, rice, soybeans, ar tables were produced. high cost of keeping the v forced the company to clo and part of the area claimed by the waters, by and by the birds.

The big honkers were arriving daily at Lake Mattamuskeet, and just as soon as the law allowed, which was December 8 in this zone, they were followed by gunners, whose migration south is just as inexorable as that of the geese.

Few hunters in blinds, chaffing cold hands, and moaning piteously over the slim limit and short season, realized that they were having their sport on a $17,000,000 playground, nor that beneath the webbed feet of the birds riding on the 50,000-acre lake was once the richest and one of the largest farms in the world. Nor that the waters now cover the bed of the only railway ever built into this region, nor that beneath the geese blinds was a substantial and prosperous village, promising to be the capital of a New Goshen.

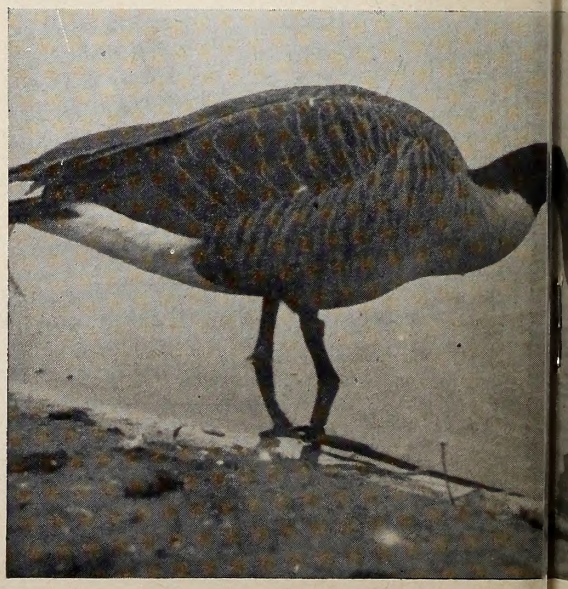
The Ganders Know

But the patriarchal ganders, some of them fifty years old, know all about it. This is, they quack, the damndest lake that ever was. And on pleasant December afternoons, when the birds gather safely out in the middle of the lake to pull at eel grass and other tid-bits, one of the old-timers among the honkers can be prevailed upon to tell fledglings the amazing story of Lake Mattamuskett; how it was given to the birds by the fire god and twice kidnapped, twice restored again by man.

For hundreds of years the birds had been wintering here — not only geese, but ducks, egrets, herons, swans, terns, grebes, cormorants, bitterns, eagles, ospreys, and quail. Wild grass and grain thrived in the wet, black soil, and it was mighty fat living. The water was full of bass and perch, and on the shore was an abundance of deer and bear.

But a stock company in 1913 conceived the idea of pumping the lake (seven miles by eighteen miles) to get to the fabulously rich soil beneath it. So, on its south shore was erected under direction of D. N. Graves, the greatest pump ever built up to that time, with a capacity of 1,-

Lake Mattamuskeet, left above, 50,000-acre refuge in Hyde County, twice was kidnapped kind, twice restored to the game which tee surface and around its shores. In summer, the perch fishing is fine; in winter it is the great feeding ground on the Atlantic flyway. Thi was made from the tower shown at right abov life Resources Commission photo.)



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The project then caught the imagination of August Hecksher, New York millionaire and philanthropist, who purchased the property and started the pumps going again. His plans were even more ambitious than those of the pioneering company, and on a grandiose scale, he planted flax, corn, rice, sweet potatoes, soybeans. Perhaps the greatest yield of sweet potatoes ever grown per acre — over 900 bushels — was produced on this lake bed. The average yield in this state is 100 bushels. And undoubtedly the largest single field of soybeans ever attempted — a plot thirteen square miles — was cultivated. Once more the confused fowl sought another winter home.

But nature took her revenge. Before much of the yield could be harvested, grasshoppers, army worms, and corn borers appeared in hordes, and this reverse, coupled with the low prices of farm commodities during the depression, again closed the gates of the new Garden of Eden.

In 1934, the Federal government acquired the property as a game preserve. The village was moved to higher grounds: the hotels razed; the pumps dismantled. The large pumping station was converted into a sportsman's lodge, and its 128-foot smokestack became an observation post. Wildlife men moved in, sowed grain and grass for the expected birds — buckwheat, soybeans, rice, sunflower, millet. The bass came back and thrived, and one day, in the Canada nesting grounds, an adventurous winged scout arrived, breathless with the news that Mattamuskeet was back, bigger and better than ever. In the meantime, the two attempts to farm the lake bed had cost the promoters over $17,000,000.

The world's largest pump once was here. Now the huge pumping station at Mattamuskeet has been transformed into a sportsman's lodge, and the 128-foot tower is an observation tower. The water in front of the tower is a canal seven miles long which leads to Pamlico Sound. The area is owned by the Federal government, with game and fish management under supervision of the Wildlife Resources Commission. (State News Bureau photo.)

Created by Fire

Lake Mattamuskeet ("Great Dust" in Indian) undoubtedly is of fire origin, since ancient charred tree trunks have been dredged from its shallow bottom. Peaty soil characterizes the territory, and even today, the "ground" sometimes burns for months after a forest fire.

The Indians told early settlers that long ago there was no lake at all. Then one year there was a great drought, and the woods and swamps were disastrously dry. To propitiate the rain gods, a huge ceremonial fire was built. But the gods looked with disfavor on this worship, and the very ground blazed, the fire spreading wide and deep, burning for thirteen moons. The game fled and the Indians faced starvation, until one day a simple maid went into the woods and invoked the mercy of the rain gods. Almost instantly, the heavens opened, and rain fell for many days. When the Indians crept to the site again, the fire was extinguished and they found before their eyes a great inland sea, limpid, teeming with fish, and upon whose waters floated succulent birds, and around whose shores were plentiful deer, bear, and other game. And so, not mentioning the two puny interruptions of mankind, the miracle has endured to this very day.

Preliminary Report On Lake James Analysis

By A. Randolph Shields

With the coöperation of the Game and Fish Division of the Tennessee Valley Authority, the Wildlife Resources Commission made a fish analysis of Lake James during the first two weeks of October, 1947. This is a preliminary report of the findings of this study. The final report will be made when the analysis of the scale samples is completed, and the smaller fishes collected are sorted and examined.

The analysis consisted of two parts: first, netting to determine the movements and abundance of those species that can be taken by net; second, total analysis of a small cove of three acres on the Catawba side of the lake, and a cove of four acres on the Linville side, making a total of seven acres analyzed.

One Per Cent Covered

Game species are not easily netted, so only the so-called rough species were taken by nets. The coves of a lake are usually inhabited by a representative number of all the species present in a lake, with the exception of the larger individuals of the basses, catfishes, and carp. Scales were taken from all the basses and other sunfishes to determine their age and growth rates. I am reporting here only fishes of a takable size, or those that would be of use to the fisherman.

The total area of Lake James is about 65,000 acres. The analysis was made in seven acres, or a little over one per cent of the total area. Our method of analysis is about 90 per cent efficient, so we can conclude that we have figures for about one per cent of the lake.

The following table gives a few species with numbers found and probable total number in the lake. Only bass above 10 inches are listed; crappie and other sunfishes above 5 inches are listed; catfishes over 7 inches are listed.

Species	No. Per Acre in Samples	Estimated Total No. in Lake
Smallmouth Bass	6.30	41,000
Largemouth Bass	1.57	10,200
Crappie	4.86	31,600
Redbreast	4.29	27,900
Bluegill	1.28	8,300
Catfish	12.30	80,000
Totals	30.60	200,000

Other species such as redhorse suckers, quillback suckers, carp, buffalo, and shad are in great abundance. The shad are for fish food only, and are not considered for human consumption. The quillback suckers, carp, and buffalo, along with the catfish, can be considered "rough fish" that are of benefit to fishermen. The redhorse suckers are taken in the streams in early spring and to some extent in late fall. They are not taken readily by hook and line from the lake. The quillback sucker, carp, and bullheads are readily taken by nets, and their removal in large numbers would help the sport fishing. The large population of bullheads and white catfish could easily be reduced by trot lines.

Estimated Numbers

The following table is an estimate of the numbers of other species of fish in the lake. These species make up those that are not usually fished for, but are good food fishes and should be removed from the lake as a crop, along with the more desirable species. If all the corn is cut from a field and the weeds allowed to grow, before long the weeds will take over.

Species	Per Acre	Total in Lake
Redhorse suckers	2.59	16,800
Carp	2.50	16,200*
Quillback suckers	4.60	30,000

* A greater poundage of carp exists in Lake James than of any other species. The pounds per acre of this species over the entire lake is estimated to be 10, or a total of more than 65,000 pounds of carp in the lake.

Our analysis shows that there is good reproduction of all the species. Large numbers of young of the year and one-year-old bass, crappie, and other sunfishes were found. A preliminary examination of the age of basses shows that the smallmouth bass are better than 10 inches in length at the end of their second summer, reaching a length of 6 inches their first summer. The largemouth bass show about the same growth. This shows that the food for these species is abundant, and that they are ready for the fisherman's creel by the time they are two years old.

Conclusions

We may now draw the following conclusions, subject to change following the final report:

1. The population of takable smallmouth bass is greater in Lake James than in any ever examined by the writer.

2. Fishermen in general take more largemouth bass because they are more easily caught than is the smallmouth. The largemouth is not so abundant in the lake as is the smallmouth, but there is good reproduction this year.

3. More careful fishermen have no trouble taking bass in the lake. After early spring the basses are found in the deep water. Trolling between 30 and 40 feet deep should produce catches of smallmouth bass all summer long.

4. More of the rough species should be removed from the lake, and ways for doing this should be legalized and supervised.

5. More rainbow trout could be taken by fishermen on the bottom

Big Sailfish Wins $5,000 Prize

A 7-foot, 11-inch sailfish which he hooked on October 4 won for Dr. Elliott R. Motley, Charlotte dentist, the $5,000 top prize in this year's second annual fall fishing rodeo of the Southeastern North Carolina Beach Association. The fish weighed 73 pounds.

Billy Jenkins of Wilmington, with a 3-foot, 9-inch channel bass weighing 40 pounds, won the $1,000 prize for the best catch taken by a surf fisherman. He made the catch off Bald Head Island on October 18. The other $1,000 prize, for the best pier-fishing catch, went to Chris Rongates of Wilmington for a 2-pound, 18-inch Virginia mullet which he took from the Atlantic View pier at Wrightsville Beach on October 16.

One world record was equalled in this year's rodeo. W. M. Cline matched the mark with a 1-pound, 12-inch pigfish taken from the Fort Fisher pier. The catch brought him a $100 award in one rodeo class.

The prizes were awarded at a dinner in Wilmington on November 18.

in the main channels, especially on the Linville side. This species is not of great importance in the lake but can offer a delightful change on occasion.

6. The gizzard shad planted two years ago by the Commission have made good headway, the prevalence of the adult of the young indicating that the basses are keeping them in hand, and that they are proving their worth as food.

7. The other sunfishes, crappie, robin, and bluebill, are doing well and are abundant enough to offer splendid fishing. The redbreast is a stream species from the eastern part of the State but is doing well in Lake James and seems to be surpassing the bluegill in numbers.

8. There is an abundance of small minnows, mostly of the genus Notropis, which furnish food for the basses, crappie, trout, sunfishes, and catfishes.

New Protectors

Three protectors have been added to the enforcement staff of the Wildlife Resources Commission in recent weeks. James B. Greene of Thomasville has been appointed in Davidson County; Willie S. Ramsey of Lincolnton, in Lincoln County; and B. L. Boswood of Maple, in Currituck County.

John Emory, formerly at the Holly Shelter Wildlife Management Area, has been transferred to Granville County as a district protector. Archie Rivenbark of Burgaw, formerly refuge protector at Holly Shelter, resumed that position in October.

SECOND PLACE

Varney Carpenter of Route 2, Cherryville, has been awarded second national prize in the 1947 fishing contest of the Western Auto Supply Company. There were 40,000 entries in the contest. Mr. Carpenter's winner, a largemouth bass taken in Lake Hickory, Catawba County, weighed 11 pounds, 15 ounces, was 25½ inches in length, and 19¼ inches in girth. It was taken on live bait. His entry was exceeded only by a 14-pound, 5-ounce largemouth taken in Florida. Mr. Carpenter received the Western Auto award at a public dinner in Cherryville on December 8.

Commission's Film Service Is Proving Highly Popular

The Wildlife Resources Commission's invitation to go to the movies is being taken up more and more frequently by sportsmen's clubs, school groups, and other organizations interested in wildlife conservation and outdoor activities.

During the three-month period ending December 1, the Commission filled ninety-nine requests for films from its library to be shown throughout the State. Even greater activity is anticipated during the coming months as more organizations learn of this phase of the Commission's educational work.

Films have been shown for wildlife clubs, veterans' vocational agriculture classes, 4-H clubs, school groups, forestry clubs, Audubon Society meetings, natural history groups, business men's groups, and garden clubs.

Newest addition to the Commission's library is "The Making of a Shooter," produced by the Sporting Arms and Manufacturers' Institute and presented to the Commission as a gift. This picture, in color and with sound, runs thirty minutes. It includes scenes of the National Rifle matches at Camp Perry and of the famed Vandalia (Ohio) trap shooting, as well as hunting scenes.

Other films which are available from the Commission:

"Trigger-Happy Harry," color, sound, thirty minutes; "Channel Bass and Stripers," featuring scenes of surf-casting for channel bass off North Carolina's Cape Hatteras, color, sound, eight minutes; "Wildlife Resources in North Carolina," color, silent, thirty minutes; "Wildfowl in Slow Motion," color, sound, twelve minutes; "Where to Now," a Ding Darling cartoon in black and white, silent, twelve minutes; "Fighting Tarpon," black and white, silent, twelve minutes; "Fun with Bluegill," color, sound, twelve minutes; "Sharp Eyes," color, sound, ten minutes; and "Pattern Matching in Nature," color, sound, eight minutes.

Also available are 150 slides, in color, of birds of North Carolina, and 300 color slides of scenes throughout the State, dealing with the outdoors, hunting, animals, etc.

The Commission has a sound motion-picture projector and slide projectors which may be engaged with movies or slides by groups which have no facilities for showing the pictures.

Bookings of films or slides—or both—may be made by writing L. G. McLean, Educational Supervisor, Wildlife Resources Commission, Raleigh. At least ten days' notice should be given when a booking is requested.

Protecting Our Wildlife

At the last General Assembly the hunters and fishermen of the State were finally successful in obtaining legislation to set up a separate department to administer the affairs of the hunters and fishermen. This was the North Carolina Wildlife Resources Commission.

The department is operated by hunters and fishermen and they have a program that we feel will greatly improve the State's hunting and fishing. However, unless they have the full coöperation of all hunters and fishermen and public officials the work will be in vain.

Hunters and fishermen must abide by the laws, especially in regard to the seasons and bag limits, and above all, obtain proper licenses.

The public officials must coöperate by making offenders, who are brought into court, pay the penalty for violating the game and fish laws. In most instances here in Beaufort County the only penalties meted out have been in court costs. Unless the law is carried out and the offenders are made to really "feel" the punishment the work of the game protectors will be of little avail.

Washington (N. C.) News.

Very young mussels, called glochidia, attach themselves to birds' feet and feathers and thus get a free ride to other waters.

Fox Hunters Hold Trials

Nearly 300 dogs were entered in the 1947 annual bench show and field trials of the North Carolina Fox Hunters Association held at Raleigh on October 29, 30, and 31. More than 500 persons attended.

Winner of the gold cup in the trials was Red Eye, a Walker hound owned by R. B. Murphy of Bahama. Red Eye came out first over 286 other entries. Second place went to Betty, owned by Hugh Chatham of Taylorsville, and third to Green Moore, owned by G. C. Moore and T. A. Moore of Chase City, Virginia.

Rose Bud, with 330 points, took first place in the derby class for hounds under two years of age. Rose Bud's owner is Jack West of Clyde. Second place went to Hi Miller, owned by R. S. McGhee of Durham, and third to Sport, owned by Frank Pace of Union Mills, Virginia.

New Officers

The Rev. Glenn A. (Razz) Miller of Gold Hill was elected president of the Association, succeeding State Treasurer Charles M. Johnson, who declined to be a candidate for the post after having held the presidency the past two years. L. O. Parker of Salisbury was elected vice president. Mr. Miller appointed I. T. Wilkerson of Concord as secretary-treasurer.

Directors reëlected are: H. L. Mays of Taylorsville, Charles M. Ball of Greensboro, Bill Welch of High Point, Ed Wright of Charlotte, R. S. McGhee of Durham, John R. Boger of Concord, J. W. Killian of Waynesville, Bunnie J. Baker of Snow Hill, Hal C. Rawls of Aulander, Jack L. West of Clyde, M. R. Garris of La Grange, John A. Bunch of Edenton, Robert C. Collins of Asheville, W. O. Hendrix of Tobaccoville, W. T. Dillard of Mebane, and T. Ross Alexander of Statesville.

The trials were run on each of the three days in the Bayleaf Community of northern Wake County. The site was ideal, because foxes were plentiful, and because of the network of roads in the area which made it possible for followers of the chase to stay near the hounds. About two dozen foxes were taken during the trials.

R. H. Suitt of North Side prepares happily to climb down from a jeep with a gray fox he captured barehanded during the annual field trials of the North Carolina Fox Hunters Association. The trials were run three days in the Bayleaf community of northern Wake County. (News and Observer photo by Lawrence Wofford.)

Big day of the trials was the first day, when eleven foxes were taken. The day also was marked by two rare occurrences — the treeing of two foxes simultaneously in one tree, and a barehanded catch of a gray fox by a hunter. He was R. H. Suitt of North Side, who ran and grabbed up an exhausted fox just before the hounds reached the quarry. Mr. Suitt quickly scrambled to the top of his jeep to rescue the fox from the dogs.

Ideal weather marked the three days, and large groups of spectators, both members and nonmembers of the Association, followed the hounds after each cast. Veteran fox hunters declared the chases to be among the best they'd ever seen.

Master of hounds was John H. Allen of Iuka, Mississippi.

The giraffe is one of the strangest animals. He has no vocal chords, but talks with his tail. He has fewer vertebrae in his neck than a mouse, faster than a horse, can go longer without water than a camel and can see backwards without turning his head.

* * *

Without eyes and living underground, the earthworm senses the fall of night and wriggles to the surface of the earth.

What Does Mere Man Know Of Non-Stop Flight Perils?

By Albert M. Day

Mr. Duck Hunter—You have had or will have a chance to enjoy your favorite sport for not more than thirty or thirty-five days of this year, depending upon whether your State has a continous or split season, and whether you are in the eastern half of the United States, or the western. That isn't much, compared to past years. You feel sorry for yourself and quietly, some of you noisily, complain about those dratted regulations and what they have done to you.

How about pausing for a moment to give thought to the duck? For the past four years he has been plagued first with drouths that sucked his northern potholes and sloughs dust dry, and then with floods. This year an unusally late cold spring was followed by heavy rains that flooded vast areas of marsh nesting lands in the eastern half of Canada.

It Started September 1

As he began the long migration southward, could he contemplate —if ducks do contemplate—becoming the center of attention in the sporting world for thirty or thirty-five days only? Not by a long shot. He had to keep a sharp eye peeled for blinds, decoys, and guns beginning September 1, if he spent the summer in eastern British Columbia, Manitoba, or the Northwest Territories. Other provinces opened from September 6 to October 1. This makes a maximum of thirty-six open days before he crossed the line into the United States on his southward journey.

Then what happens? This year he was met by the greatest army of U. S. hunters in history. Duck stamp sales last year amounted to more than 2,000,000; and this figure is probably being equaled or exceeded this fall. Think of it! Three times the number of hunters this year that were in the blinds when the recent duck decline began.

Does Mr. Duck face this army of hunters for only thirty or thirty-five days in the United States? He does not. Some hopeful and enhusiastic hunter was on the watch for him from October 7 in the northern tier of states to January 6 in the southern. This makes another ninety-two days of blazing guns, or a total of 128 by the time he reaches the Gulf or the Mexican border.

More Hunters

Then if he has survived the gauntlet and decides to go on into the Caribbean or Mexico or Central America, he faces more hunters. In some spots hunting continues until the migration urge sends the birds winging back to the nesting grounds. Add the rest of January and all of February for such areas and we bring the total period of shotgun hazard to 181 days. Thus, those hardy birds that travel the perilous route down the West Coast from British Columbia to Yucatan, or through the Mississippi Valley from Manitoba to Cuba, spend just half of the year avoiding hunters, to say nothing of illegal trappers, poachers, predators, and botulism. No wonder the birds squawk appreciatively as they dive into the safety of the all too few Federal and State refuges set apart to provide food and protection for them.

So you, Mr. Duck Hunter, when you indulge in that gripe about the season this year being too short, too early, or too late for your own particular spot, remem-

(*Continued on page twenty-one*)

"What Does Mere Man Know about the Perils of a Non-Stop Flight?" This is one of a series of cartoons by J. N. (Ding) Darling which he is permitting the National Association on Conservation Education and Publicity to distribute in a nationwide campaign of conservation education. The North Carolina Wildlife Resources Commission is a member of the National Association.

FISHING REGULATIONS FOR 1948 ADOPTED

(*Continued from page seven*)

fishes: There is no Statewide closed season on fishing for warm-water species, but the Wildlife Resources Commission may designate certain watersheds, streams, lakes, or portions of the same as spawning areas which will be closed for a designated period during any year. Streams or lakes designated as spawning areas shall be posted accordingly.

5. *Creel Limits:* It shall be unlawful in the State of North Carolina for any person to take from the waters of the State by any means whatsoever in any one day more fish of the species herein listed than the number set opposite each species as follows:

Largemouth bass, 8; smallmouth bass, 8; spotted bass (Kentucky bass), 8; striped bass (rockfish), 8; brook trout (speckled trout), 10; rainbow trout, 10; brown trout, 10; jack (chain pickerel), 8; muskellunge, 1; walleye (pike-perch), 5; bluegills, 20; redbreast (robin), 20; warmouth (openmouth), 20; yellow perch (raccoon perch), 20; white perch, 20; rock bass (red-eye), 20; crappie (speckled perch), 15; all species of perch, sunfish, and pickerel not listed above, 20.

Provided that it shall be unlawful for any person to take more than a total of 10 trout, 8 bass, or 25 fish of two or more of the above species of game fish in any one day, or to have more than two days' creel limit of game fishes in possession at any time.

6. *Size Limits:* It shall be unlawful for any person or persons to take or have in their possession or to unnecessarily destroy anywhere in the State fishes of less size than the limit specified for the several kinds of game fish hereinafter mentioned:

Largemouth bass, 10 inches; smallmouth bass, 10 inches; spotted bass (Kentucky bass), 10 inches; striped bass (rockfish), 12 inches; muskellunge, 24 inches; walleye (pike-perch), 15 inches; all other varieties of perch, sunfishes, and pickerel, none; all varieties of trout, none, provided that smallmouth bass taken from waters designated as trout waters maybe taken without regard to size-limit.

7. *Unlawful to Buy, Sell, or Ship Game Fish:* It shall be unlawful in the State of North Carolina for any person, firm, or corporation to buy, sell, ship, offer for sale, or possess for the purpose of sale game fish whether taken within or without this State. The possession of any game fish in any hotel, restaurant, cafe, market, or store, or by any produce dealer in this State shall be prima facie evidence of the possession thereof for the purpose of sale.

a. It shall be unlawful for any common carrier, or any employee of such carrier, or any person, firm, or corporation engaged in transportation for hire, to transport game fish for delivery within the State or from a point within the State to a point without.

The following species of fish are classified as game fish: brook trout (speckled trout), rainbow bass, smallmouth bass, spotted bass, black crappie, white crappie, bluegills (bream), redbreast (robin), rock bass (red-eye), warmouth (openmouth), walleye trout, brown trout, largemouth (pike-perch), yellow perch (raccoon perch), muskellunge, jack (chain pickerel), and all other varieties of sunfishes, perch, and pickerel.

White perch (Morone americana) and striped bass (rockfish) when taken from Inland Waters are classified as game fish and shall not be sold.

8. *Private Ponds:* Private ponds are bodies of water lying wholly upon the lands of a single owner or single group of joint owners or tenants in common and classified as follows: (1) Ponds maintained and stocked at the sole expense of the owner; or (2) Ponds constructed on streams in which the volume of flow of water has not been sufficient to produce fish of the minimum legal size limit and which at no time can fish of legal size limit enter from public waters.

The owners of private fish ponds and invited guests may take

KING SNAKE SWALLOWS A COPPERHEAD

A king snake near the end of his task of killing and swallowing a copperhead. When discovered, the king snake already had thrown several coils around his victim, and was proceeding to squeeze the life out of him. After the copperhead died, the king snake swallowed him, then slid away without any notice for several onlookers who had gathered. (Photo by W. E. McConnaughey, Jr.)

fish therefrom in any manner they deem advisable, without regard to season, size, or creel limit; provided that all license requirements shall apply to private ponds or lakes and that no fish classed as game fish shall be sold, except for propagation purposes as provided in Chapter 198, Public Laws of 1929.

9. *Public Waters:* All ponds or lakes not classified as private shall be considered public fishing waters. Before any such impounded waters may be drawn off, a permit must be obtained from the Director of the Wildlife Resources Commission or his duly authorized agent. All streams and rivers within which fish are free to move across property lines shall be considered as public waters, and the regulation of the fishing therein subject to the regulations as approved by the Wildlife Resources Commission.

10. *Seining for Minnows:* It shall be lawful to seine for minnows in the Inland Waters of North Carolina provided: (1) The net used is of dip-net design with opening not greater than six square feet; (2) seines of length not greater than twelve feet and with a mesh not greater than ½ inch shall be used; (3) it shall be unlawful to seine or take minnows from public waters for purpose of sale.

11. *Trot Lines:* Trot lines may be set in public waters of the State provided that no bait other than cut bait may be used. It shall be unlawful to use any variety of game fish as cut bait, or to use fish of size less than six inches in total length for cut bait.

12. *Jigger Fishing:* It shall be unlawful to fish or to catch fish by jiggering at any time of the year in waters of North Carolina. Jiggering is fishing from any kind of floating device with any type of lure or bait attached to a line under two feet in length fastened on a rod or pole.

13. *Classification of Trout Streams:* The Director of the Wildlife Resources Commission is hereby authorized to classify such streams or portions of streams in western North Carolina which he may deem advisable as trout streams. No fishing of any type shall be permitted in streams so designated except during the open season for trout fishing. Signs designating such streams shall be properly posted along the banks of such streams.

Provisions Made for Harvest Of Non-Game Fishes

At its meeting in Raleigh on December 6, the Wildlife Resources Commission approved a plan for the harvesting of non-game fishes, which departs in some respects from past regulations. It recognized that the taking of such fish as suckers, catfish, and carp is desirable if game fish populations are to be kept at the level required by sport fishermen. Many of these non-game species provide a great deal of fishing to the average angler. Fishing for these non-game species by pole and line or rod and reel is permitted at any time of the year without regard to size limits or creel limits. The Commission felt, however, that it needed to go farther than this in legalizing the take of these fishes by more efficient means.

Licensing of gill nets during the winter season was authorized along similar lines as was done last year. The season this year extends from January 1 through March 15. Licenses for this type of fishing will be carried by the district game and fish protectors and will be issued only by them. The fees charged for such licenses are established by law and affect all waters of the State. This means of taking non-game fishes has been found to be particularly desirable in the southeastern counties. Game fish are not frequently taken at this season of the year by nets, thereby permitting a harvest of a crop which otherwise would not only be wasted but would be destructive to sport fishing.

Piedmont Provision

Other sections of the State have problems in regard to coarse fish removal which the Commission hopes can be largely solved by this or other means. In former years, seining has been permitted in certain muddy waters of the Piedmont during July and August. It is believed that the taking of carp, catfish, and suckers from many of the Piedmont waters by seine has not injured the sport fishing which those waters could afford. In some of the rivers and streams of western North Carolina, there are large runs of suckers and red-horses which are utilized to a very limited degree. Special provision has been made whereby the Director may approve the use of special fishing devices where circumstances warrant their use for the removal of non-game fishes. District fish and game protectors will work in close cooperation with the fisheries biologists in carrying out the program.

The program as outlined by the Commission is a very liberal one and is being adopted on a trial basis. If it is found that the privileges granted are abused, the result will be further restriction rather than liberalization of our coarse fishing regulations. Game fish taken in connection with the use of special fishing gear of the type described must be carefully returned to the water.

Shad and Herring

The special licenses mentioned here are required of all those who fish for shad and herring. The season for taking shad and herring is different from that in force last year (please see schedule). The Commission feels that it has an important charge in the conservation of shad and herring which are important food fishes. It maintains that there should be a reasonable harvesting of these fishes from inland waters, but that the brood stock should not be endangered by overfishing.

All regulations listed herein supercede any previous local regulations.

The regulations for taking of non-game fishes from inland waters:

1. *Shad and Herring:* All varieties of shad and herring shall be classified as fresh-water fishes when found in Inland Waters, and fishing for the same shall be under the jurisdiction of the Wildlife Resources Commission. Fishing for shad and herring shall be permitted on Thursday, Friday, and Saturday only, with gill nets or skim nets having a bar of not less than one and one-half inches. All such nets must be licensed as provided in Chapter 1008, Public Laws of 1945. The open season for taking shad and herring in Inland Waters shall be from

(*Continued on page twenty-three*)

Wildlife Club Activities

Forsyth County

Wendell Tesh was elected president of the Forsyth County Wildlife Club at a meeting on November 6. Other new officers are E. F. Landry, vice president, and Gordon Pritchett, secretary-treasurer. Outgoing officers were Paul Jones, Dr. Fred Garvey, and Roy Craft. At a later meeting of club leaders, an active program of local work was laid out. This will include an educational program in the city and county schools, pushing a proposal for opening the city lake to fishing, and an effort to obtain a skeet field for Winston-Salem sportsmen.

Burke County

Jim Connelly was elected president of the Burke County Wildlife Club in elections at the club's annual banquet in Morganton on November 19. P. V. Watlington was named vice president and Worth Giles secretary-treasurer. H. L. Shuey, retiring president, was named chairman of the board of directors, to serve with Jake Mullis, Ed Hern, and Boyd Moore. Principal speaker was Ross O. Stevens, Executive Secretary of the North Carolina Wildlife Federation.

Caldwell County

The Caldwell County Wildlife Club at its November meeting discussed immediate need for cooperation with farmer friends upon whose lands attempts were being made to reëstablish quail. The club wholeheartedly voted to honor "posted" signs and to aid in spreading the information to nonmembers to elicit their coöperation. Pollution problems were discussed briefly; game refuge areas were described and it was agreed to present some of the areas for the Wildlife Resources Commission's consideration. L. G. McLean, Educational Supervisor of the Commission, presented motion pictures on shooting, gunhandling, and the out-of-doors. He also told briefly the aims of the Commission in an educational program for youth.

McDowell County

S. L. Homewood was elected president of McDowell's new Wildlife Club formed at a meeting on December 8 in Marion. Thirty-five persons paid dues for membership. John Dobbins of the Nix Creek section was elected vice president; A. Jack Hewitt, secretary; and David Blanton, treasurer. R. W. Proctor was named chairman of a committee to prepare and present a constitution and by-laws. Other committee members are Walker Blanton, Cato Holler, and W. G. Gibbs.

Mimosa Fishing Club

Prize winners in the 1946 fishing contest of the Mimosa Fishing Club have been announced by Secretary Andrew J. Smith of Morganton. One record was broken—by a 27-inch rainbow trout taken which Horace Holder took on natural bait in Linville River. There was a large entry list from the more than 600 members of the club. First-place winners in the various divisions: largemouth bass—Frank Jones Garrison, 7 lbs., 7 oz.; smallmouth bass—J. N. Corpening, 22 ins., 5 lbs.; rainbow (artificial bait)—J. H. Hairfield, 17 ins.; rainbow (natural bait)—Horace Holder, 27 ins.; brown—Dwight Scott, 21½ ins.; brook—James Collett, 16½ ins.; crappie—Ben Page, 1 lb., 12 oz.; perch—Logan Dellinger, 1 lb.; catfish—J. R. Crockett, 6 lbs., 12 oz.; ladies division—Mrs. J. N. Corpening, largemouth bass, 6 lbs., 4 oz.

Durham County

Jesse W. Cole was named president of the Durham County Wildlife Club at a meeting on November 25 attended by about 200 persons. John T. Manning was elected vice president; D. D. Matthews, secretary; and Carl L. Bunting, treasurer. After a barbecue dinner, the meeting heard a talk by Willis King, Executive Director of the Wildlife Resources Commission. He spoke on the finances of the Commission and outlined the services available from the Commission.

Vance County

Work of the law enforcement section of the Wildlife Resources Commission was outlined by Frank Wade, district fish and game protector in Vance County, at a meeting of the Vance Wildlife Club on December 13. He declared that wildlife clubs can do more than any other group to give North Carolina a plentiful supply of fish and game. B. C. Wells of Henderson, new president of the club, appointed S. W. Renn, Shelton Wade, and Hugh Jones as a committee to investigate the possibilities of a club restocking program. Other new officers are R. D. Buchan, vice president, and J. W. Jenkins, Jr., secretary-treasurer.

Johnston County

Macy L. Hoyle of Smithfield is the new president of the Johnston County Wildlife Club, succeeding A. S. Johnston of Smithfield. Other new officers are L. H. Johnson of Kenly, vice president, and Bill Norton of Smithfield, secretary-treasurer.

Chowan County

J. Rodney Byrum of Edenton has been elected president of the Chowan County Wildlife Club for the new year. Officers elected to serve with him are C. J. Hollowell, vice president, and M. A. Hughes, secretary-treasurer.

CLUB PROJECTS

Wildlife club officers who would like help in selecting and setting up active club projects and programs are offered assistance by "Sports Afield" magazine. Monthly bulletins are issued by the publication, the Wildlife Resources Commission has been informed, which detail specific jobs to be carried out. Recognized authorities prepare the bulletins.

Those which have been issued thus far are: "Shooting Dog Stakes," "Fish Tagging," "Fishing Ponds for Kids," "Homemade Hunting," "Ducks on Your Pond," "Give Them a Shootin' Game," "Fishing Boat Races," "Here Are Your Birds—by the Barrelful," "Sportsmen for Tomorrow," "Financing Your Sportsmen's Club," and "Stop that Burning!"

The only requirement that the magazine puts on requests is that they be written on the club's official stationery. Officers who are interested should write to:

Sportsman's Club Director
Sports Afield
405 Second Avenue South
Minneapolis, Minnesota.

Polk County

J. W. (Dick) Taylor of Tryon was elected president of the Polk County Wildlife Club at a meeting at the Tryon school on November 26. Other new officers are Bennett Hinsdale of Green's Creek Township, vice president, and Dudley C. Smith of Tryon Township, secretary - treasurer, The club approved an amendment to its constitution which sets up a thirteen-man board of directors consisting of six farmers, a representative from each of six sportsmen's groups (fishermen, fox hunters, upland-bird hunters, big game hunters, small game hunters, and trappers), and one director at large especially well informed on wildlife conservation and game management. Some 250 members and their guests heard a talk by L. G. McLean of the Wildlife Resources Commission which he supplemented with three wildlife movies. The meeting followed a turkey shoot. Almost a hundred members and guests banged away at fleeting clay birds at Harmon Field. A barbecue followed the shoot.

Lincoln County

A large attendance at the November meeting of the Lincoln County Wildlife Club, of which Ralf Lineberger is president, saw movies from the Wildlife Resources Commission's film library. L. G. McLean of the Commission's Education Section explained the film and made a brief talk on the work being conducted by the Commission. Special guests were George W. Keesee, member of the Commission from District Eight, and Ross O. Stevens, Executive Secretary of the North Carolina Wildlife Federation.

WHAT DOES MERE MAN KNOW OF NON-STOP FLIGHT PERILS?

(Continued from page seventeen)

ber this: For the ducks the season runs from September 1 to March 1 — six months — with 2,000,000 hunters in the United States lying in wait, plus the hunters of Canada, Mexico, Cuba, and Central America, augmented by many visitors from the United States.

As Ding so aptly puts it, "What Does Mere Man Know About the Perils of a Non-stop Flight?"

A STREAM SURVEY OF THE SAVANAH WATERSHED

(Continued from page eleven)

ture River and Toxoway River were other game species found. In both of these streams smallmouth bass were taken. Largemouth bass were found only in the lower Horsepasture River. These occurrences can probably be considered as reproducing populations which originally were introduced into impounded waters along the rivers, from which they escaped, and form an example of unwise management at some earlier time. The habitat of these streams is obviously unsuited to the largemouth bass and specimens of both smallmouth and largemouth were large-headed and thin, indicating poor conditions. Neither species should be encouraged, and at present time neither is common. Bullheads, another food species, were also taken in the lower Horsepasture, but are not likely to become serious competitors of the rainbow trout.

Summary

The features of any watershed which are of importance to good fishing fall into two categories, the favorable and unfavorable. At the present time the favorable characteristics are in the majority in the Savanah watershed. Increased human occupancy could readily throw the balance on the other side. Outstanding among the favorable elements are the good watershed cover, scant settlement, absence of pollution and silting, and inaccessibility. These are all related and contribute to maintaining a low fishing pressure. Pools, fish shelter, and chemistry of the water are generally excellent. The temperature conditions are generally favorable but approach marginal conditions in the larger streams.

On the other side of the ledger we find few and poor riffle areas, fluctuating water levels and the related low food production. The numerous falls and slides not only make temperature conditions critical but prevent upstream movements of fish which would otherwise maintain better population balances. These falls, as well as lack of roads and trails, make it difficult for the fish culturist to distribute to the best advantage the trout he is stocking.

The sum total of these factors is an inviting prospect to the outdoorsman and trout fisherman who takes a week-end camping and fishing trip in this area. He should find himself amply repaid in scenic beauty, seclusion, and fighting fish.

Hunting Season in Final Month

With the arrival of the New Year, hunters moved into the fag end of the 1947-48 season in North Carolina.

New Year's Day brought the close of the seasons for deer, bear, squirrel, and European wild boar. It also was the final day of wild turkey hunting in eleven of the twenty-one counties which had an open season on the big birds this year. In the other counties, the final day will be January 15.

January 6 wound up the migratory waterfowl season.

Still in progress are the seasons for quail, rabbit, and ruffed grouse, which continue through the last day of January; this month also is open for the second period of the State's split season for mourning doves.

Do We Exemplify It?

Here in North Carolina we have our differences but we don't let them wreck our progress.

The differences between advocates and opponents of the separation of the Division of Game and Inland Fisheries from the Department of Conservation and Development is a case in point.

During the legislature there was quite a fight on this issue. The Wildlifers won out.

But now the board and the commission get together and lay plans for coöperation and coördination of effort between them.

That is the Tar Heel spirit. Do we exemplify it here in Elizabeth City and the Albemarle?

Elizabeth City Daily Advance.

Extracts Prepared

Leaflets containing the fishing regulations for Inland Waters which will be in effect during 1948 and some of the major laws affecting water resources have been prepared by the Wildlife Resources Commission for general distribution.

Copies will be distributed through district fish and game protectors and license agents, and from the Commission's office in Raleigh.

Beaglers Meet At Salisbury

Beagles from fourteen states were entered in the field trials of the Carolina Beagle Club held the week of November 17-22 at the B. H. Miller farm near Salisbury. The entry list totaled 221.

Winners in the 15-inch dog class (fifty-four entries) were: First, Sureboys Pat, owned by Herbert Campbell of Greenville, South Carolina; second, Salt Work Elmer, owned by Glen R. Fleming of Elderton, Pennsylvania; third, Vassey's Cherokee Major, owned by D. E. Hudson of Gaffney, South Carolina; fourth, Perry's Sport, owned by W. Paul Perry of Durham; reserve, Guion's Rocket, owned by Dr. H. N. Guion of Marshville.

Winners in the 15-inch bitch class (thirty-three entries): First, Hardin's Spindale Queen, owned by Earl Hardin of Spindale; second, Smoky Mountain Betty, owned by Arnold Phillips of Asheville; third, Fleming's Daisy, owned by John Neamand of Asheville; fourth, Wilhelm's Queen W, also owned by Mr. Neamand; reserve, Parker's Carolina Queen, owned by Charles B. Parker of Statesville.

Winners in the 13-inch dog class (sixty entries): First, Park Ray Trademark, owned by S. C. Candler of Madison, Georgia; second, Lanchester Chief Leader, owned by J. H. Wrape of Asheboro; third, Guion's Pete, owned by Dr. Guion; fourth, Smoky Wade, owned by L. I. Wade of Elkin; reserve, Ohio Diamond, owned by R. Bennett of Butler, Pennsylvania.

Winners in the 13-inch bitch class (seventy-four entries): First, Rolcap Sally, owned by Dr. Basil Page of Buchannon, West Virginia; second, Johnson's Vick, owned by D. T. VeHorn of Greenville, South Carolina; third, Gill's Gay Girl, owned by J. M. Gill of Salisbury; fourth, Scrubgrass Judy, owned by C. H. Schwartz of Emlenton, Pennsylvania; reserve, Locust Lane Lady, owned by E. Haven of Asbury Park, New Jersey.

At a business session, Edwin B. Gill of Salisbury was elected president of the Club, succeeding L. I. Wade of Elkin. Dr. H. N. Guion of Marshville was named first vice president and J. H. Wrape of Asheboro, second vice president. Hubert I. Reinhardt of Newton was reëlected secretary-treasurer. H. Nantz of Kannapolis was selected as assistant secretary. Members of the executive committee are Arnold Phillips of Asheville and Herman Kincaid and Fred Koontz, both of Salisbury.

Licenses on Sale

The mailing department of the Wildlife Resources Commission got its Christmas wrapping done early—and the contents of the packages are now available to sportsmen.

They're 1948 fishing licenses, and it's time to see about getting one of them. They were mailed out before mid-December, and sale of them by fish and game protectors and their agents started January 1. The 1947 variety expired on December 31 (except for fishing privileges on a 1947-48 combination hunting and fishing license, extending to July 31, 1948).

Types of fishing licenses offered: State resident (good statewide), $3.10; county resident (good in home county only), $1.10; resident daily permit, 60 cents; non-resident yearly license, $6.10; non-resident daily permit, $1.10; and non-resident five-day permit, $2.60.

Publications Available

Important Food and Game Fishes of North Carolina, by Willis King, Executive Director of the Wildlife Resources Commission, heads the list of publications available from the Commission. Copies may be obtained by writing to the Commission offices in Raleigh. The cost is twenty-five cents each. Several bulletins may be had for no charge. These include "Bicolor Lespedeza — for Farms and Game Preserves," "The Norris Lake Fishing Experiment," "Vegetation of Holly Shelter Wildlife Management Area," "The Uwharrie Deer Project," "Wildlife Crop on Your Farm," "Farming for Wildlife," "Construction of Farm Ponds," and "The Mammals of North Carolina."

The young elk is called a calf; the young deer a fawn and the young antelope a kid.

Possession Law Is Strict

This is a reminder to hunters about North Carolina's law regarding out-of-season possession of game birds and animals.

The law states: "Game birds and game animals lawfully taken may be possessed during the open season therefor and the first ten (10) days next succeeding the close of such open season, but a person may not have in possession at any one time more than two (2) deer, two (2) wild turkeys and two days' bag limit of other game animals and game birds."

During the last session of the General Assembly, an effort was made to bring the law up to date, in view of the increasing use of freezer lockers. The proposed measure would have permitted possession at any time of game lawfully taken, under strict supervision of Fish and Game Protectors. After receiving the approval of the House Committee on Conservation and Development, the bill failed, however, on the floor when it was ordered sent back to committee. There it rested until adjournment.

The laws also prohibit bringing game into North Carolina from other states during the closed season for the species concerned. The law states: "The possession, transportation, purchase or sale of any dead game animals, dead game birds, or parts thereof during the closed season in North Carolina, though said animals, birds, or any parts thereof were taken or killed without the State in the open season in such State, shall be unlawful; and the possession of same shall be prima facie evidence of the violation thereof."

Pisgah Raccoon Hunt

The first raccoon and opossum hunt permitted on the Pisgah National Game Preserve since its establishment was held on four areas on October 15, 16, 17, and 18, and November 3. The hunt had been planned for only the first four dates, but the November hunt was allowed because rain prevented hunting on October 16. Sixty-six parties totaling 148 hunters participated. They killed eight raccoon, largest of which was a 17-pounder taken by John Smiley of Hazelwood.

PROVISION MADE FOR HARVESTING OF NON-GAME SPECIES

(*Continued from page nine*)

March 1 to May 1, inclusive, in all waters south of the Neuse River and its tributaries, and from April 1 to June 1, inclusive, in the Neuse River, its tributaries, and in all inland waters north of the Neuse River.

2. Non-game fishes may be taken from Inland Waters by pole and line, rod and reel, by casting, or by trot line at any time without restrictions as to size limits and creel limits.

3. Non-game fishes may be taken from designated waters, January 1 through March 15, by use of such nets as may be authorized and licensed by the Wildlife Resources Commission and under the supervision of the district game and fish protector.

4. Non-game fishes may be taken by seine, gig, or other device from designated waters under special license issued by the Wildlife Resources Commission, and under the supervision of the district game and fish protector.

5. No permits or licenses for the taking of non-game fishes shall be issued without authorization by the Director of the Wildlife Resources Commission or his designated representative.

All special fishing regulations not listed above are hereby repealed

Schedule of Fees

The following fees apply to gear authorized for use in Inland Waters:

Anchor gill nets, one dollar for each one hundred yards or fraction thereof.

Stake gill nets, fifty cents for each hundred yards or fraction thereof; provided that when any person uses more than one such net the tax shall be imposed upon the total length of all nets used and not upon each separately.

Drift gill nets, one dollar for each hundred yards or fraction thereof.

Pound nets, two dollars on each pound; the pound is construed to apply to that part of net which holds and from which the fish are taken.

Skim or dip-nets, fifty cents each.

Each seine and drag net under one hundred yards, one dollar.

Each seine and drag net over one hundred yards and under three hundred yards, one dollar for each hundred yards or fraction thereof.

For other apparatus used in fishing, the license shall be the same as that for the apparatus or appliance which it most resembles for the purpose used.

AN HONEST SPORTSMAN

If the shade of Diogenes were still looking around with its lantern for an honest man his search would have ended at Holly Shelter Lodge on October 31.

David Blackman of Carolina Beach, while hunting with Guide Sonny Meeks near the Holly Shelter Wildlife Area in Pender County, killed a doe deer by mistake and thereby hangs a tale. On the hunt, the dogs were bringing a rocking-chair buck directly toward Mr. Blackman. Rather than risk a long shot at the buck, Mr. Blackman decided to wait until it crossed a small bay and be sure at point-blank range.

Everything was going according to schedule, and when a deer broke from the cover of the bay, Mr. Blackman waited no longer and let go with a load of double-o. The deer fell, and it seemed that the dream of a really nice head was realized. When Mr. Blackman approached his "buck," he was amazed to find that his big buck was, in reality, a doe. The old buck, as bucks have been doing since the advent of man, dogs, and gun, had prudently let the foolish doe go ahead while he skulked in the safety of cover.

No doubt the temptation was great to let the doe lie and lose a shirt-tail for missing his buck. But he sorrowfully lugged the doe to his car and carried it to John H. Emory, the nearest game protector, patiently waited until Emory returned from a patrol twenty miles away, and told his story. Tried before Justice of the Peace Blake of Burgaw, he was duly found guilty and fined.

Sighed Mr. Blackman, "It was worth it to my peace of mind; anyway, I know I've done the right thing."

Attend Conference

Members of the Wildlife Resources Commission staff had important places on the program of the first annual Southeastern Fisheries and Wildlife Conference, held in St. Petersburg, Florida, on November 3, 4, and 5.

Willis King, Executive Director of the Commission, was chairman of the general session on the afternoon of the first day, and participated in a fisheries discussion on the second day. Robert J. Wheeler, Jr., was a contributor to discussions of predator problems and of wild turkeys. Kenneth A. Wilson was a contributor to a discussion of fur management problems.

Other Commission staff members who attended the conference were Dennis Hart, Federal Aid Coördinator, and A. Randolph Shields, and Edwards E. Hueske, Fisheries Biologists.

Staff Members Write Booklet

A booklet on pen-rearing of game birds written by two members of the Wildlife Resources Commission staff has been published by the Wildlife Management Institute. The writers are Dennis Hart and Ted R. Mitchell; the booklet is "Quail and Pheasant Propagation."

In the foreword, Dr. Ira N. Gabrielson, president of the Institute, says the booklet is presented "as one of a series of 'know how' bulletins designed to help an individual or a sportsmen's club to provide themselves with better supplies of game."

Large-scale propagation is not the idea the booklet seeks to promote. Taking note of what he thinks is proper criticism of quantity propagation by state game agencies, Dr. Gabrielson says the Institute believes that only small-scale programs can be carried out economically and efficiently.

The authors, whose experience includes ten years' operation of a model game farm and experiments in adapting pen-reared birds to natural conditions, present basically a system of propagation originated by George S. McCarty and further developed by others, including the authors.

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Seasons and Bag Limits for 1947-48

SUNDAY HUNTING UNLAWFUL

Game (Species)	Open Season (Dates Inclusive)	Bag Limit (Day)	Possession Limit	Bag Limit (Season)
Bear*	Oct. 15-Jan. 1	2	2	2
Deer** (Male—deer must have antlers plainly visible)	Oct. 6-Jan. 1	1	2	2
Russian Wild Boar	Oct. 15-Jan. 1	2	2	2
Opossum and Raccoon (with gun and dogs)	Oct. 15-Feb. 15	None	None	None
Quail†	Nov. 27-Jan. 31	8	16	150
Rabbit‡	Nov. 27-Jan. 31	8	16	None
Squirrel§	Sept. 15-Jan. 1	8	16	None
Wild Turkey¶	Nov. 24-Jan. 15	1	2	2
Ruffed Grouse	Nov. 27-Jan. 31	2	4	10
Fox	(County Regulations)			

EXCEPTIONS TO SEASONS

*Bear—

Exception: Bear hunting is allowed in Bladen, Brunswick, Columbus, Cumberland, Harnett, Hoke, New Hanover, Robeson, Sampson, and Scotland counties on Tuesdays, Thursdays, and Saturdays only.

Exception: Bear hunting is allowed in Beaufort, Carteret, Craven, Duplin, Greene, Jones, Lenoir, Onslow, Pamlico, Pitt, and Hyde counties Mondays through Saturdays from Ocotber 6 through November 27, and on Tuesdays, Thursdays, and Saturdays only from November 28 through January 1; and in Pender County, Mondays through Saturdays from October 6 through November 11, and on Tuesdays, Thursdays, and Saturdays only from November 12 through January 1.

**Deer—

All counties or parts of counties not listed below are closed to deer hunting.

Hunting for deer is permitted in Bertie, Camden, Chowan, Currituck, Dare, Edgecombe, Gates, Halifax, Hertford, Martin, Northampton, Pasquotank, Perquimans, Tyrrell, and Washington counties from October 6 through January 1; except that in Dare County, Atlantic Township and Roanoke Island are closed to deer hunting, and in Hatteras Township the open season is November 1 through November 30.

Hunting for deer is permitted in Beaufort, Carteret, Craven, Duplin, Hyde, Jones, Lenoir, Onslow, and Pamlico counties from October 6 through November 27 Mondays through Saturdays, and from November 28 through January 1 on Tuesdays, Thursdays, and Saturdays only; and in Pender County from October 6 through November 11 Mondays through Saturdays, and from November 12 through January 1 on Tuesdays, Thursdays, and Saturdays only.

Hunting for deer is permitted in Bladen, Brunswick, Columbus, Cumberland, Harnett, Hoke, Lee, Moore, New Hanover, Richmond, Robeson, Sampson, and Scotland counties from October 6 through January 1 on Tuesdays, Thursdays and Saturdays only.

Hunting for deer is permitted in Buncombe, Henderson, Haywood, and Transylvania counties (except as outlined below) from November 10 through November 29. All of each of the above counties is open to deer hunting except that portion of Buncombe lying southeast of Asheville and bounded on the north by U. S. Highway 70 and on the west by U. S. Highway 25; all of Henderson County open except that portion lying east of U. S. Highway 25; and all of Haywood County except that portion lying north of U. S. Highway 19-23.

Hunting for deer is permitted in Avery, Caldwell, Burke, McDowell, Mitchell, and Yancey counties on November 10, 11, 12, 20, 21, and 22, except that all lands lying within the Mount Mitchell Coöperative Wildlife Management Area, Mount Mitchell State Park, and the Daniel Boone Coöperative Wildlife Management Area are closed to deer hunting; also that portion of Burke and McDowell counties lying south of U. S. Highway 64-70 is closed.

Exception: In and west of Alleghany, Wilkes, Caldwell, Burke, and Rutherford counties the possession limit and season limit on deer is 1.

†Quail—

Exception: Quail hunting is allowed in Beaufort, Bladen, Brunswick, Carteret, Columbus, Craven, Cumberland, Duplin, Edgecombe, Greene, Harnett, Hoke, Hyde, Jones, Lenoir, Martin, New Hanover, Onslow, Pamlico, Pender, Pitt, Robeson, Sampson, Scotland, Tyrrell, Washington, and Wayne counties on Tuesdays, Thursdays, and Saturdays only.

‡Rabbit—

Exception: Hunting for rabbits is allowed in Beaufort, Bladen, Brunswick, Carteret, Columbus, Craven, Cumberland, Duplin, Edgecombe, Greene, Harnett, Hoke, Hyde, Jones, Lenoir, Martin, New Hanover, Onslow, Pamlico, Pender, Pitt, Robeson, Sampson, Scotland, Tyrrell, Washington, and Wayne counties on Tuesdays, Thursdays, and Saturdays only.

Exception: In and west of Alleghany, Wilkes, Caldwell, Burke, and Rutherford counties the daily bag limit on rabbits is 5 and the possession limit is 10.

§Squirrel—

Exception: Squirrel hunting is permitted in and west of Alleghany, Wilkes, Caldwell, Burke, and Rutherford counties from September 15 through December 15. Daily bag limit is 5 and the possession limit is 10.

Exception: No open season on Southern Red Squirrel (Boomer).

Hunting for squirrels is allowed in Alamance, Alexander, Cabarrus, Caswell, Catawba, Chatham, Cleveland, Davie, Davidson, Durham, Forsyth, Franklin, Gaston, Granville, Guilford, Iredell, Lincoln, Mecklenburg, Orange, Person, Randolph, Rockingham, Rowan, Stanly, Stokes, Surry, Union, Vance, Wake, Warren, and Yadkin counties from September 16 through September 30, and from November 27 through January 1.

Hunting for squirrels is allowed in Anson, Bertie, Camden, Chowan, Currituck, Dare, Edgecombe, Gates, Halifax, Hertford, Hyde, Johnston, Lee, Martin, Moore, Montgomery, Nash, Northampton, Pasquotank, Perquimans, Richmond, Tyrrell, Washington, Wayne, and Wilson counties from October 6 through January 1.

Exception: On Roanoke Island, Dare County, no open season.

Hunting for squirrels is allowed in Beaufort, Carteret, Craven, Duplin, Greene, Jones, Lenoir, Onslow, Pamlico, and Pitt counties from October 6 through November 27, Mondays through Saturdays, and from November 28 through January 1 on Tuesdays, Thursdays, and Saturdays only; and in Pender County, October 6 through November 11, Mondays through Saturdays, and from November 12 through January 1 on Tuesdays, Thursdays, and Saturdays only.

Hunting for squirrels is allowed in Bladen, Brunswick, Columbus, Cumberland, Harnett, Hoke, New Hanover, Robeson, Sampson, and Scotland counties from October 6 through January 1 on Tuesdays, Thursdays, and Saturdays only.

Exception: Two Fox Squirrels may be included in daily bag.

¶Wild Turkey—

Hunting for turkeys is allowed in Bertie, Halifax, Martin, Northampton, and Washington counties from November 24 through January 15.

Hunting for turkeys is allowed in Anson, Lee, Montgomery, Moore, Richmond, and Wake counties November 27 through January 1; except that no turkey hunting is permitted in Uwharrie Wildlife Refuge.

Hunting for turkeys is allowed in Chatham, Durham, Person, Granville, and Orange counties November 27 through January 15.

Hunting for turkeys is allowed in Bladen, Cumberland, Harnett, Hoke, and Scotland counties from November 27 through January 1 on Tuesdays, Thursdays, and Saturdays only.